

MSCI FIXED INCOME BENCHMARK FAMILY

BENCHMARK STATEMENT

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1 Objective of the Indexes in the Family

- 1.1 The MSCI fixed income index family is comprised of indexes whose aim is to accurately and objectively measure performance of a market or economic reality as represented by an investment opportunity set accessible to institutional investors based on a market, market segment, theme, or investment strategy. MSCI's primary fixed income index methodology is the MSCI Corporate Bond Index Methodology. Other fixed income indexes within the family, including custom indexes, are in general derived and maintained based on the universe of securities used by the MSCI Corporate Bond Index. Any exception to this rule would be highlighted in the respective fixed income index methodology books.
- 1.2 The fixed income universe from which MSCI constructs all of its fixed income indexes is comprised of corporate bonds with fixed coupon rate, domiciled in developed markets. A fixed income index representing a particular market, market segment, theme or investment strategy will reflect the relevant proportion of this universe.
- 1.3 The categorization of a particular market as developed is based on the MSCI Market Classification Framework.
- 1.4 The MSCI Corporate Bond Index serves as the parent index for other MSCI fixed income indexes that address specific investment themes such as MSCI Factor Indexes and MSCI ESG Indexes.
- 1.5 A particular fixed income index will be governed by a number of methodology documents, including the specific fixed income index methodology (as well as a parameter sheet if required), the MSCI Corporate Bond Index Methodology (or any other parent index methodology), the MSCI Fixed Income Index Calculation Methodology, the MSCI Fixed Income Data Methodology and the MSCI Fixed Income Index Policies.
- 1.6 The MSCI fixed income index family also includes custom indexes that may include specific screens, exclusion lists, or alternative weightings on parent indexes described above.
- 1.7 The MSCI fixed income index family contains only Non-Significant indexes as defined by Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indexes used as benchmarks.

2 Methodology and Index Design Guidelines and Reviews

- 2.1 MSCI indexes, regardless of index family, aim to accurately and objectively measure performance of a market or economic reality as represented by an investment opportunity set accessible to institutional investors based on a market, market segment, theme, or investment strategy. MSCI indexes, regardless of index family, are constructed and maintained with the following prime objectives in mind:
- Representativeness
 - Replicability
 - Efficiency
- 2.2 The index design objectives are achieved through the use of a transparent rules-based methodological approach to index construction and maintenance.
- 2.3 MSCI indexes are rebalanced on a regular schedule ranging from daily to annually. The MSCI Corporate Bond Index is rebalanced monthly while the MSCI Fixed Income Factor Indexes are rebalanced on quarterly basis. A rebalancing may also be triggered by conditions specified in the relevant methodology.
- 2.4 As part of the regular index rebalancing process, MSCI indexes are reviewed relative to the market or strategy they are designed to reflect. This assists in the evaluation of methodologies for both consistency and effectiveness and may highlight situations where changes in the methodology are warranted to reflect changes in the underlying market opportunity.

3 Index Content Governance

- 3.1 MSCI's Index Policy Committee ("IPC") and Fixed Income Index Committee ("FIIC") preside over content matters relating to its indexes, such as the development and interpretation of MSCI Fixed Income Index methodologies.
- 3.2 The FIIC is primarily responsible for supervising the design, development, approval and interpretation of index methodologies. The FIIC's role is to ensure that the design of a given index aligns with the design objectives set forth in section 2 of this document that final decisions are consistent with the relevant index methodology, and that, in complex cases where different interpretations are possible, the right focus is applied. FIIC discussions may be informed by feedback from the investment community. Nonetheless, all decisions taken by the committees are the sole responsibility of its members.
- 3.3 Additionally, for the MSCI Corporate Bond Index and certain other designated methodologies, all results and analysis related to Index Reviews are presented to, reviewed, discussed, and approved by the FIIC.
- 3.4 The IPC serves as an escalation point for the FIIC. Relevant topics deemed to have material importance, as determined by the FIIC, are discussed and decided by the IPC.

4 Index Calculation and Discretion

- 4.1 MSCI indexes in the MSCI fixed income index family are calculated using fixed income security prices provided by internationally recognized data vendors.
- 4.2 The return of the indexes is determined in a number of currencies including USD, EUR GBP etc.
- 4.3 The MSCI Fixed Income Indexes rely on the continued availability of prices from data vendors and permission for MSCI to use such data for determining the MSCI fixed income indexes. To the extent that such data is temporarily or permanently unavailable, MSCI Fixed Income Indexes apply the fallback measures as described in the MSCI Fixed Income Index Calculation methodology.
- 4.4 The rules for MSCI index construction, maintenance and calculation are contained in publicly available methodology books and complemented with internal guidelines and operating procedures. Each process is conducted by well-trained personnel according to documented rules and operating procedures.
- 4.5 MSCI's rules-based index methodologies provide that discretion is not used in the production of the indexes except in unusual cases not effectively addressed by the methodology. These include, but may not be limited to:
 - Corporate events not previously encountered or unusually complex in nature,
 - Structural changes to the underlying markets,
 - Geo-political events,
 - Operational issues at data vendors
 - Events beyond human control
- 4.6 Where there may be a need to take an action that is not prescribed in the methodology, senior members across the MSCI Index Research and Data Management departments will develop a proposed approach with the goal of remaining consistent with the goals of the methodology and ensuring timely calculation and distribution. These proposals are reviewed by the FIIC. In cases when time permits, and the cases are deemed material, MSCI may consult with clients on the proposed approach. MSCI will then announce the decided action to all market participants at the same time.
- 4.7 Typically, MSCI does not perform explicit ex-post analysis of decisions other than through its regular reviews of indexes and methodologies but always welcomes feedback from market participants on decisions made.
- 4.8 The framework described above eliminates the exercise of discretion by an individual and ensures any required exercise of discretion is managed through escalation to committees of experts. All committees are governed by terms of

reference and all decisions are appropriately documented and archived. The IPC and FIIC currently each have at least 6 members respectively and decisions are reached by consensus.

5 Corrections

- 5.1 In the case of data errors that occur in the determination or calculation of an index, regardless of index family, if the impact of the error is below a documented threshold as defined in MSCI Fixed Income Index Policy document, no historical index restatement is made.
- 5.2 If the impact of the error on performance is above the threshold¹ as defined in MSCI Fixed Income Index Policy document at the index level, indexes are restated historically.
- 5.3 In certain circumstances, such as errors in the list of index constituents (e.g., a security is unintentionally omitted), or the error affects a large number of securities (e.g. a third of the prices in a particular market are in error) MSCI may also correct and restate history, even if the aggregate impact is small.
- 5.4 MSCI applies a 12-month correction period for index errors. Errors discovered that are older than 12 months are generally not corrected.
- 5.5 Corrections related to regular index rebalancings or corporate events are assessed on a case by case basis. MSCI typically considers the following factors in determining the most appropriate corrective action: index investability and replicability as well as potential reverse turnover.
- 5.6 All corrections are announced simultaneously to all market participants.

¹ Current threshold is 5 basis points

6 Consultations

- 6.1 MSCI indexes, regardless of index family, are regularly reviewed and evaluated by the Index Research team. MSCI conducts consultations before making any material changes to a methodology.
- 6.2 A consultation begins in general with an announcement giving the highlights of the MSCI proposal(s) and indicating the location of the consultation document on MSCI's website. The announcement is widely distributed through multiple channels, including the MSCI website, Bloomberg and Reuters, and directly to MSCI's clients. MSCI collects feedback from market participants in a variety of formats including but not limited to in person meetings, calls, mails, surveys, etc. as deemed appropriate. These consultations provide relevant market participants the time and opportunity to comment on any potential changes to the concerned index methodology.
- 6.3 Once a consultation is closed and MSCI has gathered all required feedback, the FIIC and, if appropriate, the IPC, reviews the feedback and makes a decision. Any decision to implement changes is announced publicly prior to implementation.
- 6.4 The final decision, including the rationale that has led to it and high-level participation statistics, is communicated publicly to all market participants at once. Most consultation participants request that their feedback remains confidential. MSCI may nevertheless publicly disclose feedback if specifically requested by respective market participants. In that case, the relevant feedback would be published together with the final results of the consultation.
- 6.5 If the final decision is to change the methodology, it will be part of the announcement, including the timeframe for the implementation of the change. Subsequently, MSCI will update the relevant methodology books.
- 6.6 The length of a consultation and lead time provided for implementation varies depending on the complexity of the topic, breadth of client impact as well as impact on the index composition and is clearly communicated as part of the consultation process. The length of a consultation needs to be sufficient for market participants to meaningfully review what is proposed and respond.
- 6.7 For custom indexes, changes to any client specifications are discussed directly with the relevant client.
- 6.8 In case of methodology changes that are not deemed as material², MSCI may make such changes without launching a public consultation. In such cases, once the methodology changes are approved by the FIIC, they are announced

² The FIIC determines if a methodology change is material. This determination is made based on the analysis of the currently estimated or potential future impact of the methodology change on the index composition, measured by the changes in the selection and/or weights of the index constituents. Fundamental changes in the index construction principles would be generally considered as material



by MSCI to all the market participants at the same time. MSCI takes into account prior feedback that may have been received on such topics, as part of its ongoing engagement with market participants. MSCI may also solicit views from its clients or other specific stakeholders on the consultation topic prior to making the changes.

7 Index Terminations

- 7.1 While terminations of MSCI indexes, regardless of index family, are rare, MSCI has clear written policies to address them. There may be certain circumstances where the methodology cannot be adapted in which case terminating the index may be required. These circumstances are generally not within MSCI's control and may include significant changes to the structure of underlying market, drastic changes to the market infrastructure, lack of access to necessary data, geo-political events, and regulatory changes. Additionally, factors such as methodology convergence or low usage may result in MSCI's proposal to terminate an index.
- 7.2 In all of these cases if an index termination is proposed or required, MSCI would proceed as follows:
- The FIIC would review the appropriateness and impact of a potential termination.
 - MSCI may perform a consultation including a discussion of possible alternatives, if any.
 - MSCI would announce the termination of the index in advance.
 - If practicable, MSCI would continue to calculate the index for an announced period of time to give users the opportunity to transition to another index or otherwise prepare for the termination of the MSCI index
 - In the event that an appropriate alternative MSCI index is established, the details of the methodology governing this index as well as the timing of the transition would be publicly announced in advance of the implementation.
- 7.3 Indexes may also be discontinued if fewer than the required minimum number of securities are eligible for inclusion when applying a given methodology to a market. In these cases, the index can no longer be calculated in compliance with the applicable methodology and it will simply stop. MSCI may resume calculation of such indexes if, over time, enough securities become eligible.
- 7.4 The termination of a custom index is handled in consultation with the relevant client.

8 Index Usage

- 8.1 MSCI indexes, regardless of index family, may be used for a variety of purposes, including for research or use as the basis for index-linked investment products. They may be used by a variety of market participants including but not limited to asset owners, portfolio managers, broker-dealers, and researchers. Not all uses are appropriate for all users. Market participants should use their judgment when selecting an index for a particular purpose.
- 8.2 MSCI indexes, and the effectiveness of index methodologies can be affected by a number of factors, most of which are beyond MSCI's control. These may include, but are not limited to, structural changes to the underlying market including decreases in the size and liquidity of the relevant market segment, infrastructure changes, geo-political events, and regulatory changes. These circumstances may result in a material change the methodology as a result. In rare cases, these circumstances may result in the termination of an index.
- 8.3 If financial product issuers or investment managers choose to use an MSCI index, regardless of index family, as the basis of an index-linked financial product or an investment fund, they should consider this possibility, including the potential need to terminate or modify the terms of a financial product resulting from the termination of the calculation of the index.
- 8.4 MSCI assumes no responsibility for potential use of its indexes, regardless of index family, for particular purpose by clients, whether that use is for research, benchmarking, the basis for an index-linked financial product or investment fund, or some other use. The effective representation of a market or strategy is the primary aim for MSCI.

9 Additional Information

- 9.1 Detailed methodology and policy documents, a search function to find the methodology documents governing a specific MSCI index, regardless of index family, and vendor reference codes, if available, can be found on www.msci.com.

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Appendix I – Key Terms

Key term	Definition
Developed Market(DM)	List of countries that have met quantitative and qualitative criteria defined within Market Classification Framework in MSCI Global Investable Market Indexes (GIMI) methodology.
Fixed Income Index Committee (FIIC)	The Fixed Income Index Committee (FIIC) is primarily responsible for the supervision of the design, development, approval and interpretation of index methodologies. Decisions taken by the FIIC are the sole responsibility of its members. The committee is staffed strictly by MSCI employees.
ESG Indexes	Indexes that are designed to accurately and objectively measure the performance by an investment opportunity set that represents an investment strategy focused on environmental, social and governance (ESG) themes.
Factor Indexes	Indexes that are designed to accurately and objectively measure the performance by an investment opportunity set that represents the return of factors and additional systematic risk premia, which have historically demonstrated excess market returns over the long run.
Index Policy Committee (IPC)	The Index Policy Committee (IPC) is responsible for final decisions with respect to market classifications and may be consulted on selected index terminations and is an escalation point for the FIIC. Relevant topics deemed to have material importance, as determined by the FIIC, are discussed and decided by the IPC.

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